coated over the entire surface of the semiconductor substrate more reliably.

On the other hand, according to the invention of Claim 3, the semiconductor substrate is not rotated in the first processing step, and, according to Claim 4, the semiconductor substrate is rotated at a velocity in the range of 1000-1500 rpm in the first processing step. In both cases, the semiconductor substrate is rotated at a velocity of 3000 rpm or more in the second processing step, so that the resist material is deposited over the entire surface of the semiconductor substrate more reliably.

In this way, according to the present invention, it is possible to reduce significantly the amount of resist material deposited, and hence the cost of the manufacturing process of the semiconductor device.

CLAIMS

1. A resist material deposition method characterized by the fact that it comprises the following processing steps: a first processing step in which the resist material is fed to the central portion of the semiconductor substrate, and a second processing step in which the aforementioned semiconductor substrate is rotated at a high velocity so that the aforementioned resist material is spread smoothly toward the circumferential portion of the aforementioned semiconductor substrate.

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2. The resist material deposition method described in Claim 1, characterized by the fact that in the second processing step, the semiconductor substrate is rotated at a velocity of 3000 rpm or more.

3. The resist material deposition method described in Claim 2, characterized by the fact that the semiconductor substrate is not rotated in the first processing step.

4. The resist material deposition method described in Claim 2, characterized by the fact that in the first processing step, the semiconductor substrate is rotated at a velocity in the range of 1000-1500 rpm.

add a2

ABSTRACT

The objective of the inventio is to provide a resist material deposition method which allows reliable deposition using a small amount of resist material without unevenness.

The method of the present invention comprises the following processing steps: a first processing step in which the resist material is fed to the central portion of the semiconductor substrate, and a second processing step in which the aforementioned semiconductor substrate is rotated at a high velocity so that the aforementioned resist material spreads out smoothly toward the circumferential portion of the aforementioned semiconductor substrate. In the first processing step, the semiconductor substrate is rotated at a velocity in the range of 1000-1500 rpm; in the second processing step, the semiconductor substrate is rotated at a velocity in the range of 3000-3800 rpm.

REFERENCE NUMBERALS AND SYMBOLS AS SHOWN IN THE DRAWINGS

1 Chuck; 2 Semiconductor substrate; 3 Resist material; 4 Arm; 5 Receiving portion; 6 Filter.

Specification

Table I. Sequence of Embodiment

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	1.0	1500	-
2	0.8	0	○
3	1.0	3700	○
4	0.4	800	○
5	1.0	800	-
6	20.0	2940	-

Table II. Sequence of Comparative Example

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	1.0	1500	-
2	4.0	1500	○

3	1.0	800	–
4	20.0	2940	–

Table III. Sequence of Embodiment 2.

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	20.0	1000	–
2	0.3	0	○
3	0.4	3000	○
4	0.3	1500	○
5	0.3	1000	–
6	25.0	2010	–

Table IV. Sequence of Comparative Example 2.

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	1.0	1000	–
2	2.5	1000	○
3	0.3	1000	–
4	25.0	2030	–

Table V. Sequence of Embodiment 3.

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	20.0	700	-
2	0.2	0	O
3	0.3	3000	O
4	0.2	1500	O
5	4.0	1500	-
6	3.0	4610	-
7	19.0	4610	-

Table VI. Sequence of Comparative Example 3.

Step	Time (sec)	Rotational velocity (rpm)	Depositing of resist
1	2.0	700	-
2	6.0	1500	O
3	0.5	1500	-
4	3.0	4800	-
5	19.0	4800	-